

Workshop on Dual Robotic Arm Measurement Platform 18 January 2023 (Wednesday)

Onsite-Online Event, Hong Kong

Venue:

AM Room 15-202, 15/F, Lau Ming Wai Academic Building, City University of Hong Kong (CityU)

PM Room 15-226, 15/F, Lau Ming Wai Academic Building, City University of Hong Kong (CityU)

****Live demonstration for onsite participants and video demonstration for online participants**

Onsite (with limited seats) is for the CityU staff and student

Online (Zoom) is for the participants outside CityU

Schedule

Time	Presentation title	Speaker
10:00 – 11:30	Introduction to the structure and components of the measurement platform	Ms. Lee Yat Wing
14:15 – 16:30	Demonstration of the hardware and software setup	Ms. Lee Yat Wing

Registration: <https://events.vtools.ieee.org/event/register/341975>



Dual Robotic Arm Measurement Platform

Ms. Lee Yat Wing

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Abstract

5G and 6G communications forecast ultra-high frequency measurements in the coming decades. The high accuracy measurements of the reflector and antenna design for millimetre wave (MMW) and terahertz (THz) antenna are essential in 5G and beyond communications development. In this talk, the speaker is going to introduce a dual robotic arm measurement platform which is the latest high-frequency measurement technology. Compared to the traditional measurement technology, this 14-axis system comprised two 6-axis robotic arms with additional z-axis and phi-axis positioners providing high flexibility and great precision automated antenna and reflector measurements. We will exhibit the basic structure and components of the platform. The detailed procedure to set up the measurement including the robotic arms control, fixtures and frequency converter installations will be presented. Besides, the speaker will demonstrate the measurement tasks using the software sub-system. The radiation pattern for planar and hemispherical scans will be conducted to perform near field, far field and holographic patterns yielding characterization of the antenna's performance.

Biography

Lee Yat Wing received a bachelor's degree from the Department of Electrical Engineering, City University of Hong Kong in 2021. After graduation, she has joined a robotic company New World CAD/CAM Development Ltd as a R&D engineer. She is also a part-time research assistant at the Department of Electrical Engineering at the City University of Hong Kong. She is invited by Dr. WONG, Steve Hang who is the deputy director of the State Key Laboratory of Terahertz and Millimeter Waves to join the development of high-frequency robotic measurement. She has participated in this project since 2022 and contributed to the invention and testing of the dual robotic arm antenna measurement platform.

***** ALL ARE WELCOME *****

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